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COST-EFFECTIVENESS ANALYSIS OF PUBLIC HEALTH INTERVENTIONS TO PREVENT OBESITY IN NEW ZEALAND

Mernagh P¹, Coleman K¹, Cumming J², Green T³, Harris J⁴, Paech D¹, Weston A¹
¹Health Technology Analysts, Sydney, NSW, Australia, ²University of Victoria, Wellington, Wellington, New Zealand, ³University of Canterbury, Christchurch, New Zealand, ⁴Ministry of Health, New Zealand, Wellington, New Zealand

OBJECTIVES: To provide evidence to assist decision making and cost-effective investment in population-based public health interventions designed to prevent obesity and obesity-related health problems in New Zealand. The findings will inform policy makers about the relative merits of different investments, with a view to reducing the prevalence of a range of chronic health problems. **METHODS:** Following a systematic review of literature, a cost-utility analysis was conducted using a lifetime model to rank the cost-effectiveness of selected intervention scenarios in the New Zealand setting. In all, 1- scenarios across six interventions were considered; six interventions considered the whole New Zealand population, two of which considered separate estimates of the cost-effectiveness relevant to the Māori and the Pacific populations individually. For each intervention, a simulation model estimated the increase in BMI for individuals exposed to the intervention and for those not exposed. The model then calculated the likelihood of individuals in each group contracting any of fourteen BMI-related chronic illnesses, and the consequential survival and quality of life. From this, the quality adjusted years of life gained from the intervention were estimated. Similarly the additional cost of the intervention group was estimated by considering the cost of the intervention itself, and the lifetime costs of healthcare in relation to the fourteen chronic conditions for both the intervention and control groups. Increases in expenditure due to increased life expectancy were also considered. **RESULTS:** The ten scenarios ranged from highly cost-effective to not offering good value. Four of the interventions appeared highly cost-effective at less than NZ\$10,000 per QALY gained. **CONCLUSIONS:** The most cost-effective interventions for obesity prevention would appear to be a school-based programme for children and general health screening and advice for adults in a primary care setting, though all were highly sensitive to duration of benefit and discounting.

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ESTIMATING WILLINGNESS TO PAY FOR HYPERTENSION OUTPATIENT BENEFIT PACKAGES

Valera MT¹, de Rosas-Valera M²

¹University of the Philippines, Quezon City, Metro Manila, Philippines, ²World Health Organization, Manila, Metro Manila, Philippines

OBJECTIVES: Hypertension is ranked as the 4th leading cause of morbidity in the Philippines, and as such, it greatly contributes to the increasing health expenditures of the country. The Philippine Health Insurance Corporation (PhilHealth), the mandated provider of social health insurance in the country, currently only has an inpatient benefits package system for hypertension, causing many members and beneficiaries to avail of this rather than more cost-effective outpatient maintenance treatments. This study explores the possibility of contributing to the formulation of an outpatient benefits package for PhilHealth by probing into the willingness to pay of patients for anti-hypertensive healthcare. **METHODS:** An Ordinary Least Squares regression model with a log-transformed outcome variable to measure WTP was specified using various socio-economic, demographic, and health status data from PhilHealth Member Surveys. A contingent valuation approach was elicited to measure the level of WTP among respondents. An asset valuation method also complements the WTP analysis to assess ability to pay. **RESULTS:** Mean WTP was significantly ($p = 0.01$) associated with asset ownership, which was used as a proxy variable for long-term wealth. The adjusted mean WTP amounted to \$3.3 per month for anti-hypertensive medicines. WTP was also observed to be significantly higher for non-paying retirees and indigent members, which are the two most vulnerable groups in the population. **CONCLUSIONS:** Based on the results of the study, it is deemed necessary for PhilHealth to enhance safety nets for vulnerable groups and employ cost-effective measures through an outpatient benefit package for hypertension. WTP analysis, as a preference measure, is a helpful tool in determining the economic value of medical treatments to PhilHealth beneficiaries and provide basis for costing the rate of premiums for outpatient benefit packages.

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UTILISATION OF RENIN-ANGIOTENSIN SYSTEM AGENTS INVOLVED IN TREATMENT OF CARDIOVASCULAR DISEASES IN SLOVAK REPUBLIC

Bellova K¹, Gatialova K², Urban M³, Foltan V⁴, Binder R²

¹Comenius University in Bratislava, Bratislava, Slovak Republic, ²Comenius University, Bratislava, Slovak Republic, ³Slovak University of Technology, Bratislava, Slovak Republic, ⁴Faculty of Pharmacy, Comenius University, Bratislava, Slovak Republic

OBJECTIVES: The number of patients suffering cardiovascular diseases increase annually worldwide. The main objective of this study was to evaluate the utilisation of renin-angiotensin system agents (C09), as the group of medicines with highest consumption in terms of expenditures units, number of packages and DDD in Slovak Republic within the years 2006-2010. **METHODS:** Analysed data were abstracted from two databases - PharmaData and IMS. Data were studied in accordance with Daily Defined Dosage (DDD), financial units (€) and number of packages prescribed every year. **RESULTS:** The consumption of Renin-Angiotensin system agents increased within the years 2006-2010 as in number of packages as well as in terms of financial units and DDD. The most prescribed were plain ACE Inhibitors (C09A) and they raised in number of packages from 3,528,618 (2006) to 483,4360 (2008), and slightly decreased until 2010 (4,409,095). In accordance with financial expenditures, the highest consumption was in the group Angiotensin II receptor

blockers plain (C09C). The expenses increased sharply from 58,4540€ in 2006 to 1,397,097€ in 2010. The financial expenses on Angiotensin II receptor blockers combined (C09D) raised from 440,299€ (2006) to 107,2043€ (2010). According to DDD the highest consumption can be seen in C09A - ACEI plain, followed by C09B - ACEI combined, C09C Angiotensin II receptor blockers plain and the lowest in group C09D Angiotensin II receptor blockers combined. **CONCLUSIONS:** This study concluded that ACEI plays an important role in treatment of cardiovascular diseases, they are preferred, most prescribed and not so expensive as Angiotensin II receptor blockers.

PCV100

RESOURCE USE IN PATIENTS WITH ACUTE CORONARY SYNDROME - AN OBSERVATIONAL STUDY ACROSS SECONDARY AND PRIMARY CARE IN A UK POPULATION

Boggon R¹, Fox KA², Begg A³, Ray K⁴, Timmis A⁵, Hemingway H⁶, Emmas CE⁷, Van staa T¹

¹GP, London, UK, ²University of Edinburgh, Edinburgh, UK, ³University of Dundee, Dundee, UK, ⁴St George's University of London, London, UK, ⁵Barts and the London School of Medicine and Dentistry, London, UK, ⁶University College London, London, UK, ⁷AstraZeneca UK Ltd, Luton, UK

OBJECTIVES: Acute coronary syndrome (ACS) treatment guidelines recommend a range of interventions to prevent recurrence. The objective of this analysis was to assess patterns of resource use prior to and following hospitalisation for unstable angina (UA), ST elevation myocardial infarction (STEMI) and non-ST elevation myocardial infarction (NSTEMI). **METHODS:** Unique identifiers were used to link patients in a comprehensive hospital registry (Myocardial Ischaemia National Audit Project), with longitudinal primary care data (General Practice Research Database) and outcomes (Hospital Episode Statistics). The study population comprised patients ≥ 40 years, hospitalised for ACS from 2003-2009, discharged home. Resource utilisation was estimated at: 1) 1-2 year(s) prior to the hospitalisation; 2) one year prior to the hospitalisation to the hospitalisation itself; 3) discharge to one year after discharge; and 4) 1-2 years after discharge. Prescribed medications, consultations, laboratory tests and referrals to specialist care were assessed from GP. Hospital admissions and days spent in hospital, by cause, were assessed from HES. Analyses were repeated by discharge diagnosis and for patients prescribed clopidogrel in primary care within three months of discharge. **RESULTS:** Utilisation of all primary and secondary care resources assessed increased in the first three time periods, peaked in the year following discharge, and decreased in the second year. The average number of medications prescribed (mean (s.d.)) rose from (1)8.5(6.9) to (2)9.6(7.3) to (3)14.2(6.7), followed by a decrease to (4)12.7(6.5). The average number of days spent in hospital rose from (1)2.7(1.1) to (2)4.5(1.8) to (3)8.5(2.0.3), followed by a decrease to (4)4.4(1.5.1). Resource utilisation was lower in patients with STEMI compared to UA and NSTEMI, but no difference in resource use was observed for patients treated with clopidogrel. **CONCLUSIONS:** Primary and secondary care resource utilisation increases prior to an ACS hospitalisation, with a peak in the year following discharge, and a slight decrease in the second year.

Cardiovascular Disorders - Patient-Reported Outcomes & Preference-Based Studies

PCV101

POPULATION BASED STUDY : IMPACT OF ADHERENCE TO ANTIHYPERTENSIVE AGENTS ON CARDIOVASCULAR ISSUES

Perreault S¹, Yu AXY², Côté R², Dragomir A³, White-guay B³, Dumas S³

¹Université de Montréal, Montréal, QC, Canada, ²McGill University, Montreal, QC, Canada, ³University of Montreal, Montreal, QC, Canada

OBJECTIVES: Antihypertensive agents have been shown to reduce the risk of major cardiovascular events. However, there are no large effectiveness studies which have assessed adherence to antihypertensive medications and major cardiovascular outcomes in high risk individuals who have recently suffered an ischemic stroke. Our primary aim was to evaluate the relationship between antihypertensive drug adherence and non-fatal vascular events in a cohort of older patients hospitalized for an ischemic stroke and discharged in the community. **METHODS:** A cohort of 14, 227 patients with an ischemic stroke was reconstructed from individuals 65 years and older who were treated with antihypertensive agents between 1999 and 2007. A nested case-control design was conducted to evaluate the occurrence of non-fatal major cardiovascular outcomes including stroke or myocardial infarction. Every case was matched by age and duration of follow-up with up to 15 randomly selected controls. The adherence to antihypertensive drugs was measured with the medication possession ratio. Conditional logistic regression models were performed to estimate the rate ratio of non-fatal vascular events associated with adherence to antihypertensive agents, adjusting for various potential confounders. **RESULTS:** Mean patient age was 75 years, 54% were male, 23% had diabetes, 47% dyslipidemia, 38% coronary artery disease, and 14% atrial fibrillation or flutter. Adherence to antihypertensive therapy of $\geq 80\%$ decreased the risk of non-fatal vascular events RR: 0.74 (0.67-0.83), compared to an adherence of $<80\%$. A reduction in all cause mortality RR: 0.52 (0.47-0.58) was also associated with higher adherence. Male gender and cardiovascular disease were also risk factors for non-fatal vascular events. **CONCLUSIONS:** Our study suggests that higher adherence to antihypertensive medication is associated with a risk reduction of non-fatal vascular events and all-cause mortality among patients with a recent ischemic stroke.

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EVALUATION OF THE MEASUREMENT PROPERTIES OF THE ANTIHYPERTENSIVE ADHERENCE SURVEY